

ABSTRACT OF THE DISCLOSURE

A first PN junction and first current supply are connected between a first potential and a second potential. A second PN junction, first resistive  
5 element and second current supply are connected between the first potential and the second potential, the size of the second PN junction being different from that of the first PN junction. A second resistive element is connected in parallel with the first resistive element  
10 and second PN junction. A differential amplifier is configured to receive, at an inverting input terminal, a potential between a first current supply and the first PN junction and, at a non-inverting input terminal, a potential on a connection point between a  
15 second current supply and the first resistor and to control the first, second and third current supplies by a potential difference between the inverting input and the non-inverting input.